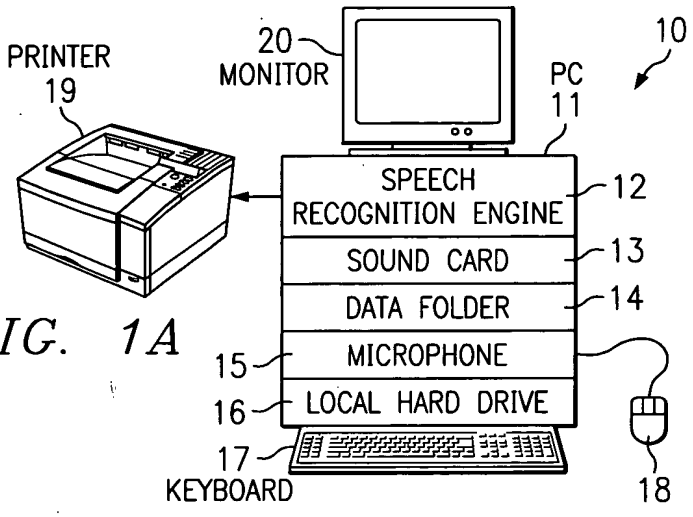


FIG. 1A

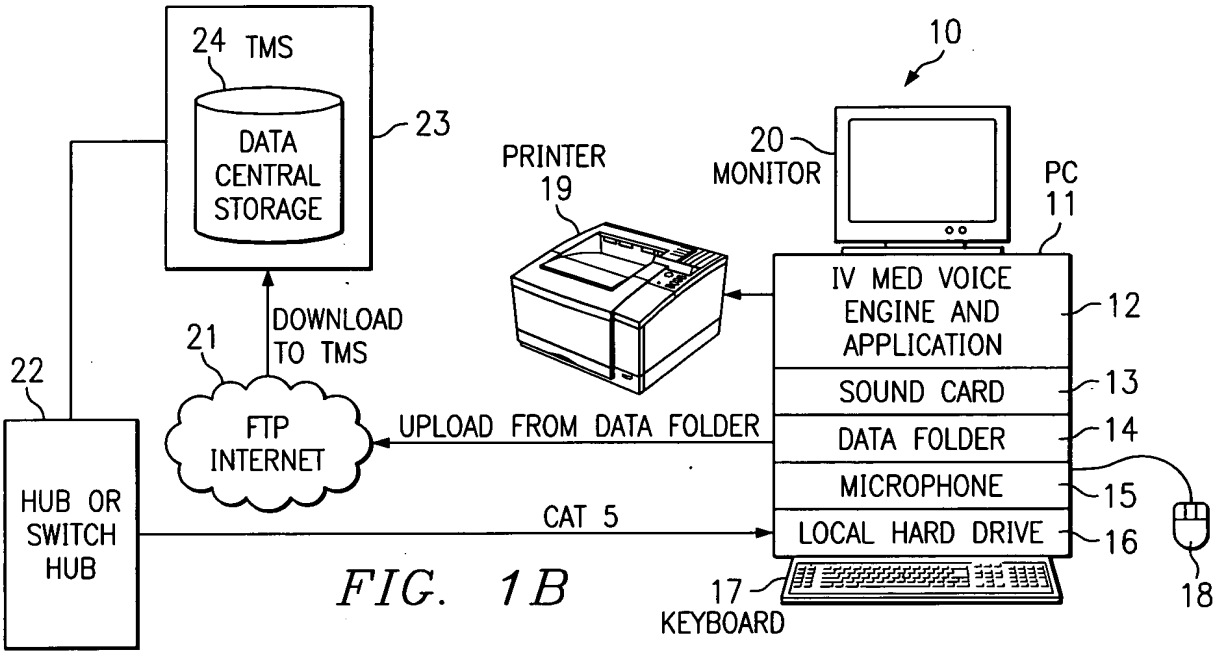


FIG. 1B

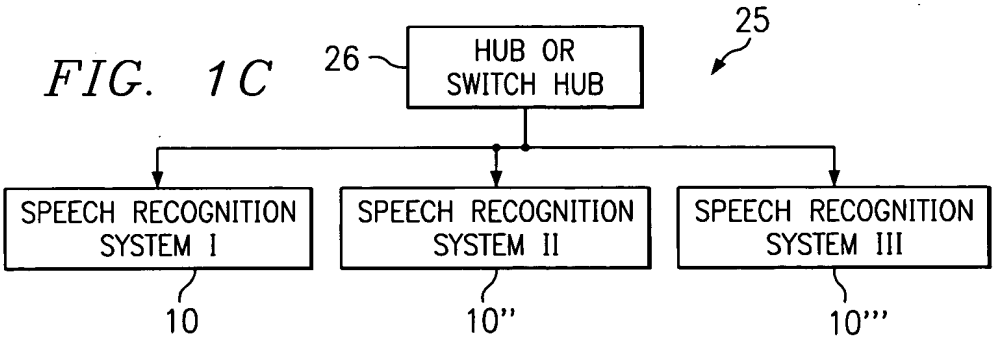


FIG. 1C

FIG. 2

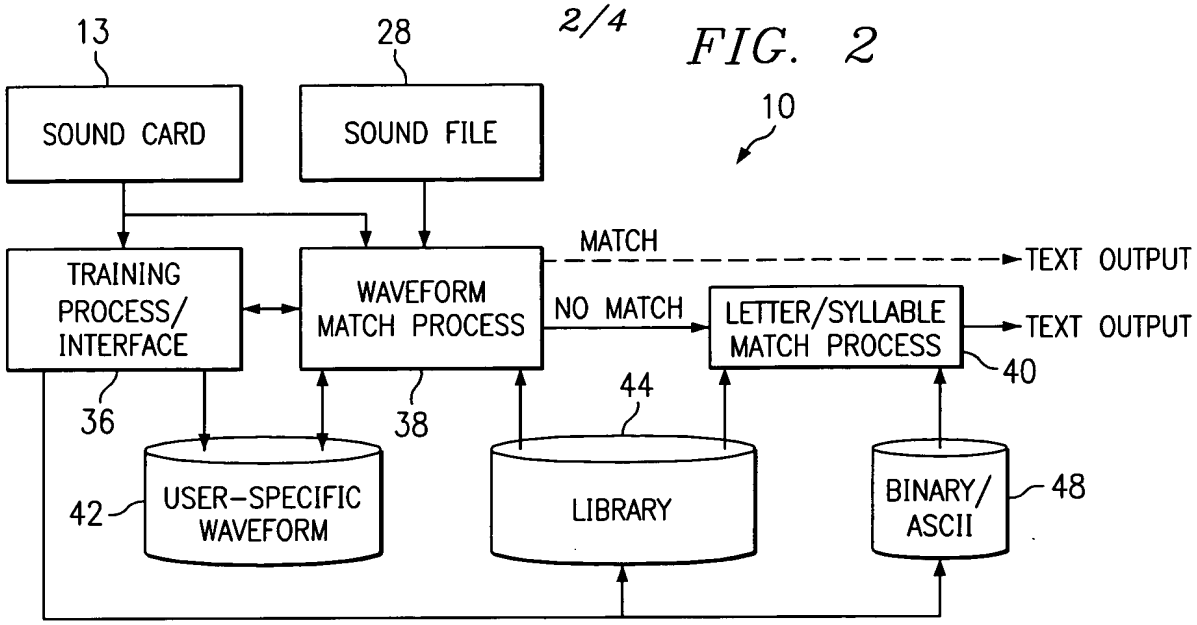
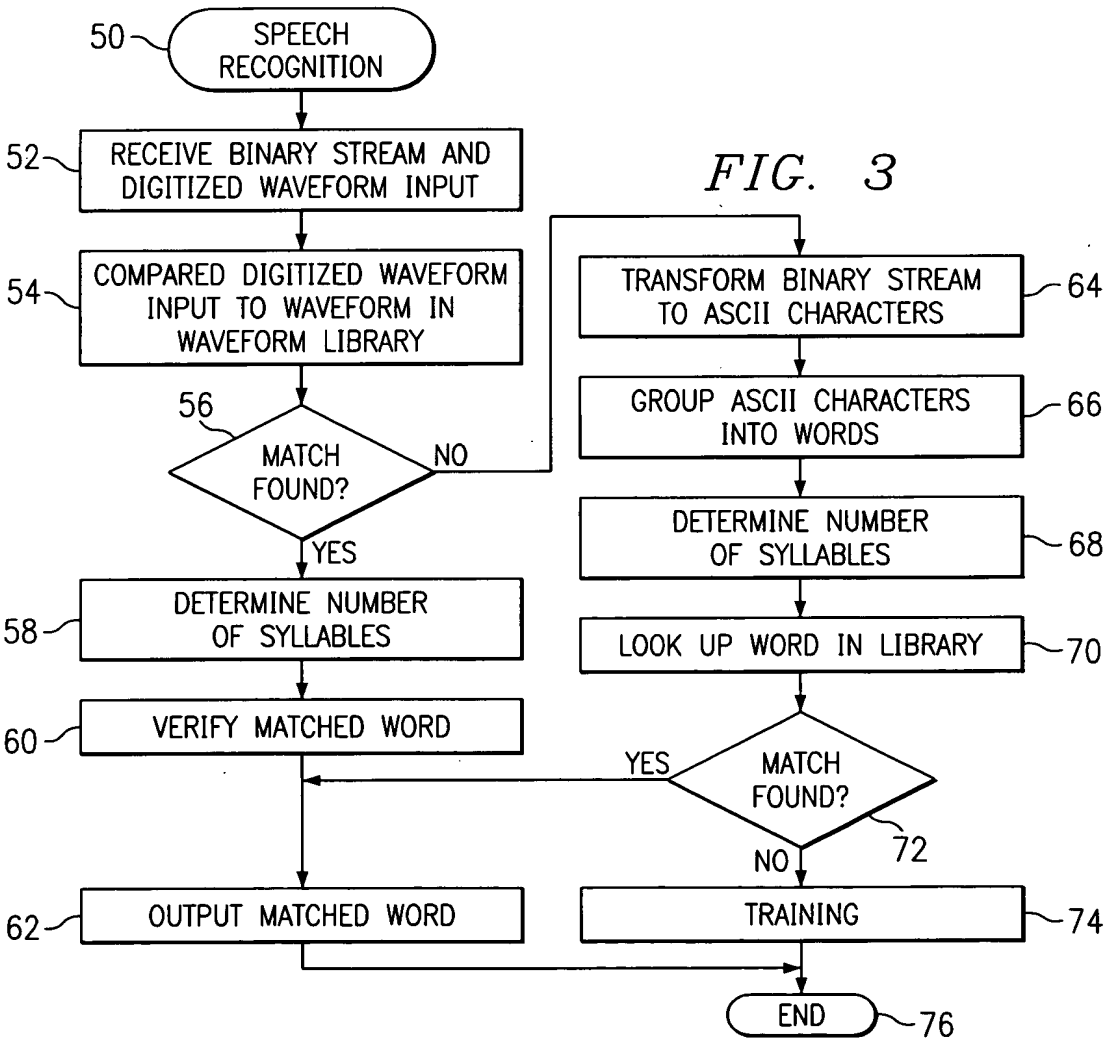

13
28
SOUND CARD
SOUND FILE
10
MATCH
TEXT OUTPUT
TRAINING PROCESS/ INTERFACE
WAVEFORM MATCH PROCESS
NO MATCH
LETTER/SYLLABLE MATCH PROCESS
TEXT OUTPUT
40
36
38
44
42
USER-SPECIFIC WAVEFORM
LIBRARY
BINARY/ ASCII
48

FIG. 3


50
SPEECH RECOGNITION
52
RECEIVE BINARY STREAM AND DIGITIZED WAVEFORM INPUT
54
COMPARED DIGITIZED WAVEFORM INPUT TO WAVEFORM IN WAVEFORM LIBRARY
56
MATCH FOUND?
NO
YES
58
DETERMINE NUMBER OF SYLLABLES
60
VERIFY MATCHED WORD
62
OUTPUT MATCHED WORD
64
TRANSFORM BINARY STREAM TO ASCII CHARACTERS
66
GROUP ASCII CHARACTERS INTO WORDS
68
DETERMINE NUMBER OF SYLLABLES
70
LOOK UP WORD IN LIBRARY
YES
MATCH FOUND?
72
NO
74
TRAINING
END
76

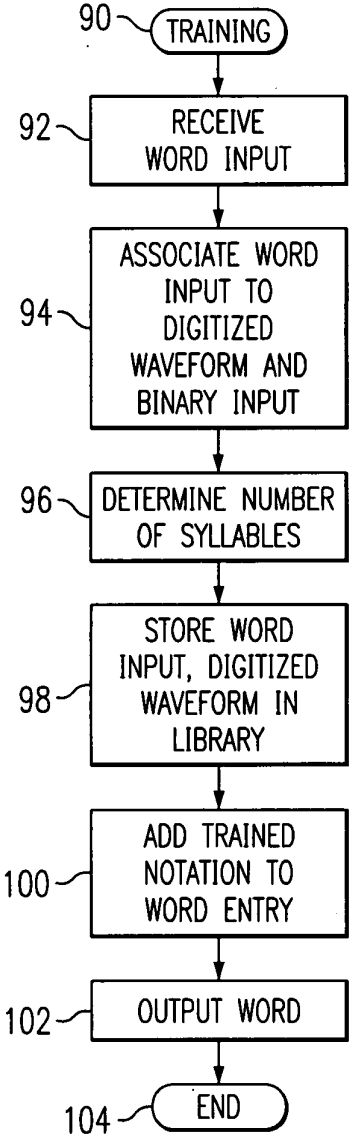
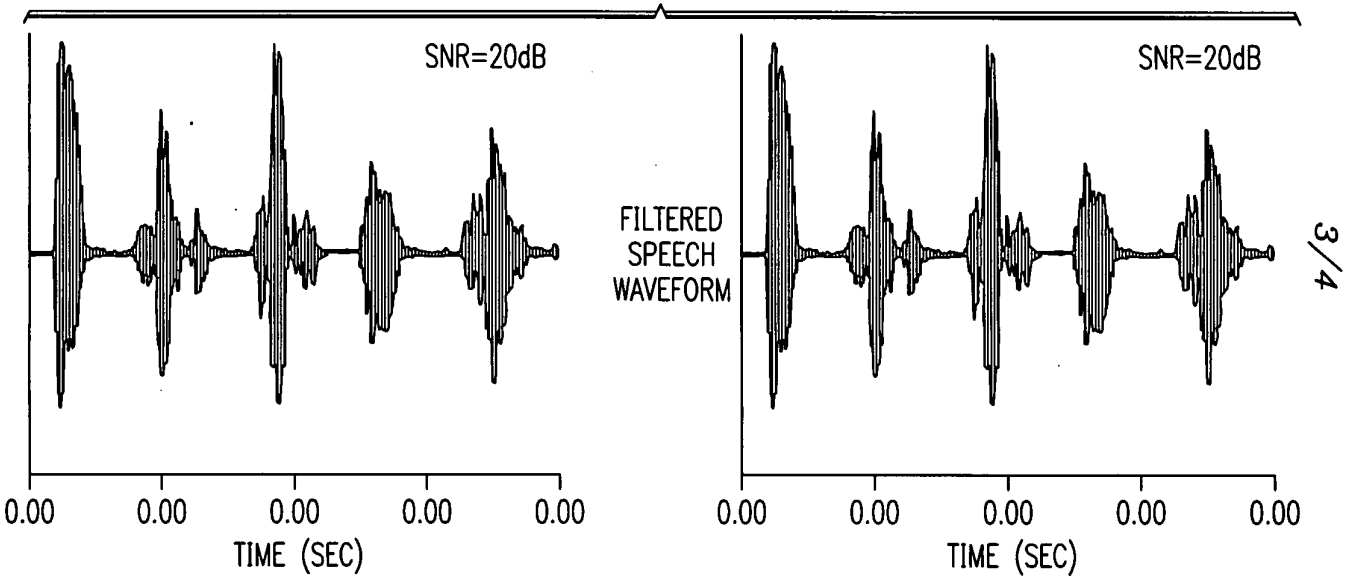

90
TRAINING
92
RECEIVE WORD INPUT
94
ASSOCIATE WORD INPUT TO DIGITIZED WAVEFORM AND BINARY INPUT
96
DETERMINE NUMBER OF SYLLABLES
98
STORE WORD INPUT, DIGITIZED WAVEFORM IN LIBRARY
100
ADD TRAINED NOTATION TO WORD ENTRY
102
OUTPUT WORD
104
END

FIG. 4

FIG. 5A


SNR=20dB
0.00
0.00
0.00
0.00
0.00
TIME (SEC)
FILTERED SPEECH WAVEFORM
SNR=20dB
0.00
0.00
0.00
0.00
0.00
TIME (SEC)

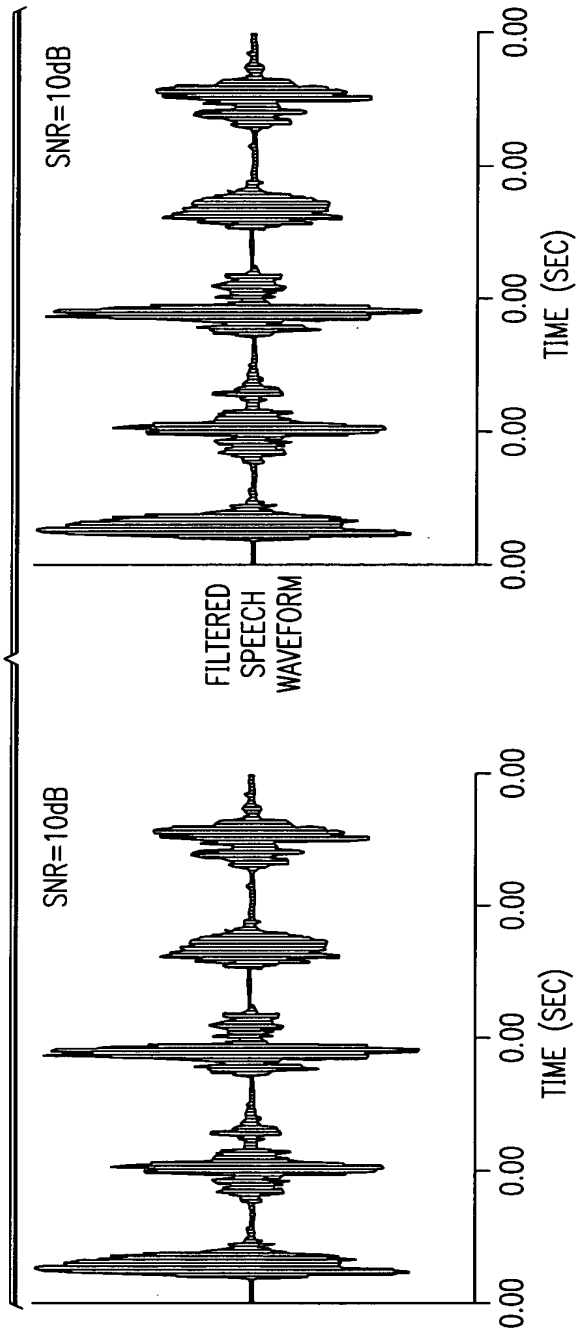

SNR=10dB
FILTERED SPEECH WAVEFORM
SNR=10dB
0.00
0.00
0.00
0.00
0.00
TIME (SEC)
0.00
0.00
0.00
0.00
0.00
TIME (SEC)

FIG. 5B

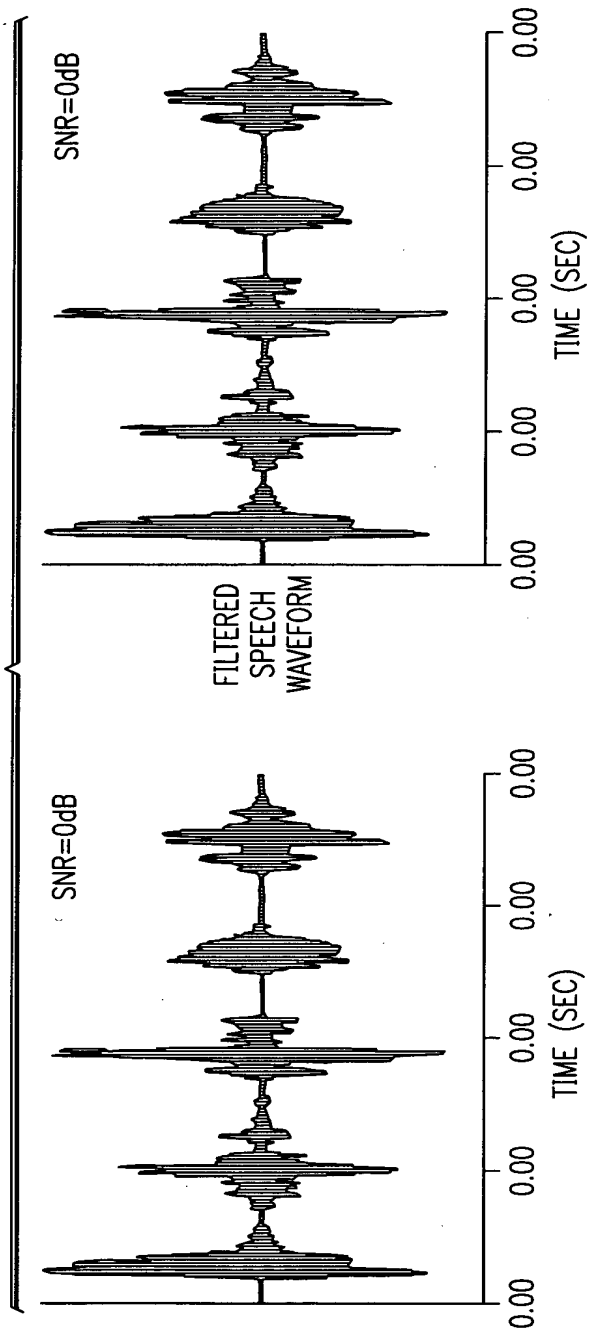

SNR=0dB
FILTERED SPEECH WAVEFORM
SNR=0dB
0.00
0.00
0.00
0.00
0.00
TIME (SEC)
0.00
0.00
0.00
0.00
0.00
TIME (SEC)

FIG. 5C